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Note

Continuation of Section 11: Applicants argue the rejection of claims 23-25, 27-41 and 44 as being unpatentable over Kuroda et al (EP 0 965 604) in view of Bradford et al (US 2003/0083397) and Hirata et al (EP 0 566 037) because

- a) Kuroda et al does not teach allophanate modified polyisocyanate
- b) Even if Kuroda et al had – it would be present from "an independent source" and therefore not match the reactants listed in claims 23, 42, and 44 which applicants further allege is supported by example 1 of Kuroda et al which fails to teach the formation of allophanate groups.
- c) Bradford et al also fail to teach a methodology that includes the preparation of allophanates from monomeric polyisocyanate - instead Bradford et al teaches "off-the-shelf" allophanates which fails to correspond to the reactants listed in claims 23, 42, and 44.
- d) Bradford et al fail to teach a single dual cure binder and instead teaches a mixture of (a1), (a2), and (a3) which is applied to a substrate then cured – not the reaction product of (a1), (a2), and (a3).
- e) Hirata et al teach the preparation of allophanate modified polyisocyanate with monol, but said monol fails to read on the claimed b) or c) components, and Hirata et al teach the allophanate forming reaction requires catalyst that is presently excluded by the transitional language "consisting essentially of".

In response to issue a), as previously stated in the final rejection and contrary to applicants' assertions - paragraph 7 of Kuroda et al teach "allophanate-modified" polyisocyanate.

In response to issue b) and c), it is noted that Kuroda et al and Bradford et al teach allophanate from an "independent source", however, this fails to establish that the claimed composition is unobvious. The fact remains allophanate modified polyisocyanate has to come from *somewhere*, and Bradford et al teach that suitable methods of allophanate production are disclosed in Hirata et al (Bradford et al – paragraph 67).

With this understanding, the rejection currently stands that Kuroda et al teach:

- (A) allophanate modified polyisocyanate
- (B) hydroxylalkyl (meth)acrylate
- (C) N-hydroxylalkyl-oxazolidine

Wherein (B) and (C) correspond to the claimed b) and c) compounds. In view of Hirata et al, one of ordinary skill would understand that (A) is the reaction product of:

- (Ai) monomeric diisocyanate or polyisocyanate, and
- (Aii) monol

In the presence of the require catalyst, and components (Ai) and (Aii) correspond to claimed a) and f) components. Therefore, after incorporating the teachings of Hirata et al, one of ordinary skill would understand that the entire reaction system comprises:

- (Ai) monomeric diisocyanate or polyisocyanate, and
- (Aii) monol
- (B) hydroxylalkyl (meth)acrylate
- (C) N-hydroxylalkyl-oxazolidine.

The fact that components (Ai) and (Aii) are reacted in separate steps from components (B) and (C) does is still sufficient to satisfy the limitations of claims 23, 42, and 44. Said claims

contain no limitations regarding the reaction *methodology*, i.e. simultaneous reaction of said components (emphasis added).

Similarly and in response to issue d) – it is noted that components (a1), (a2), and (a3) are applied as an unreacted mixture, *then* reacted, however, this is sufficient to satisfy the composition of claims 23, 42, 44, which merely requires the reaction product of the listed reactants. Applicants' arguments are not commensurate in scope with the present claims as no methodology limitations are currently present.

Finally regarding issue e), it is noted that the monol of Hirata et al does not read on components b) or c) – however as previously discussed, said monol reads on component f) and it is commonly known within the art to produce allophanate with monol and an excess of polyisocyanate in the presence of the correct allophanating catalyst.

Furthermore, regarding the presence of the allophanating catalyst and applicants' transitional language "consisting essentially of", no evidence has been set forth establishing that the presence of the allophanate catalyst of Hirata et al would have a material effect, and therefore applicants' remarks are not persuasive.

/Benjamin J Gillespie/

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